

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 14 MAR 2006

WIPO

PCT

Applicant's or agent's file reference ARSM;AGBM:30-542-7687	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/AU2004/001543	International filing date (<i>day/month/year</i>) 8 November 2004	Priority date (<i>day/month/year</i>) 7 November 2003	
International Patent Classification (IPC) or national classification and IPC Int. Cl. <i>B65F 1/12</i> (2006.01) <i>B65F 1/08</i> (2006.01) <i>A24F 19/02</i> (2006.01) <i>B65F 1/14</i> (2006.01)			
Applicant ATTWOOD BANNER PTY LTD et al			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report |
| <input type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> Box No. VIII | Certain observations on the international application |

Date of submission of the demand 1 September 2005	Date of completion of this report 03 March 2006
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer JAGDISH BOKIL Telephone No. (02) 6283 2371

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:

☒ The international application in the language in which it was filed

☐ A translation of the international application into _____, which is the language of a translation furnished for the purposes of:

☐ international search (under Rules 12.3(a) and 23.1 (b))

☐ publication of the international application (under Rule 12.4(a))

☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages **1-11** as originally filed/furnished

pages* received by this Authority on _____ with the letter of

pages* received by this Authority on _____ with the letter of

☒ the claims:

pages as originally filed/furnished

pages* as amended (together with any statement) under Article 19

pages* **12-14** received by this Authority on **6 February 2006** with the letter of **6 February 2006**

pages* received by this Authority on _____ with the letter of

☒ the drawings:

pages **1/6-6/6** as originally filed/furnished

pages* received by this Authority on _____ with the letter of

pages* received by this Authority on _____ with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-19	YES
	Claims	NO
Inventive step (IS)	Claims 1-19	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-19	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

Claims 1-19

The invention of the amended claims is a receptacle for waste having an elongated body member, the receptacle including a first outer chamber and a second inner chamber, the first and second chambers each having inlet means to permit atmospheric air to be drawn through the first chamber inlet means into the first chamber and then through the second chamber inlet means into the second chamber when vacuum is applied to the body member to draw out the contents.

Specifically, no citation or obvious combination of citations discloses such a waste disposal system wherein the second chamber is disposed inwardly of the first chamber and air is drawn through inlet means to entrain the waste.

The closest art is the arrangement depicted in figure 3 of US 3688802 wherein the second chamber (the space inwardly of the plate 65) is not disposed at least partly within the first chamber (the space outwardly of the plate 65) as claimed in claim 1 or wherein the spaces inwardly and outwardly of the plate 65 cannot be considered as *inner* and *outer* regions (relative to each other) as defined in claim 4. It is noted that parts of the space inwardly of the plate 65 are as much outwardly as the space outwardly of the plate 65.

CLAIMS

1. A receptacle for waste, the receptacle including an elongated body member having a first end for locating on or in the ground and a second end with an opening therein for receipt of waste, said body member having a first chamber and a second chamber, said second chamber disposed at least partly within said first chamber and in fluid communication with said first chamber and with the interior of said receptacle, said first chamber having inlet means to permit atmospheric air to be drawn into said first chamber on the application of a vacuum to said body member, and said second chamber having inlet means to permit atmospheric air from said first chamber to be drawn into said second chamber on the application of said vacuum to said body member, wherein contents of the receptacle are capable of being drawn from said receptacle on the application of said vacuum to said body member by entraining with said atmospheric air drawn through said chambers into said receptacle by said vacuum.
2. A receptacle for waste according to claim 1, wherein said second chamber is tapered.
3. A receptacle for waste according to claim 2, wherein said taper is in the region of said first end of said body member.
4. A receptacle for waste, said receptacle including:
a body member having a first end for locating on or in the ground and a second end with an opening therein for receipt of waste;
inlet means in the body member through which air from the atmosphere can be drawn in response to a vacuum applied at the opening; and
a venturi device located in the body member for increasing the velocity of the air once inside the body member to assist in drawing waste contained in said receptacle out through said opening, said device comprising a dividing member

arism M0111600041v3 305427687

that divides the body member along at least part of its length into an inner region and an outer region, the dividing member having an aperture, such that the velocity of air moving in response to the vacuum from said outer region to said inner region increases due to a venturi effect, as it passes through said aperture.

5 5. A receptacle according to claim 4, wherein said dividing member is substantially conical shaped.

6. A receptacle according to claim 4 or claim 5, wherein said aperture comprises a plurality of circumferentially spaced openings.

10 7. A receptacle according to claim 6, wherein said openings are located at the base of said aperture and are substantially mouse-hole shaped.

8. A receptacle according to any one of claims 4 to 7, wherein said body member is divided into said inner region and said outer region along a portion of its length commencing at the second end with the apertures being located below the inlet means.

15 9. A receptacle according to any one of claims 4 to 8, wherein the dividing member forms part of or is a separate unit that is insertable into the body member.

20 10. A receptacle according to claim 9, wherein the unit comprises a cylindrical portion having a diameter of slightly less than the body member such that the portion can be tightly fitted into the body member, and a conical portion extending from the cylindrical portion, the conical portion when inserted into the body member dividing the body member into the inner region and the outer region.

11. A receptacle according to any one of claims 4 to 10, wherein the inlet means is at least one row of circumferentially spaced holes in the body member.

25 12. A receptacle according to claim 11, wherein the holes of each row are offset from the holes of an adjacent row.

13. A receptacle according to claim 11 or claim 12, wherein a row of holes is located around 150mm from the second end of the body member.

14. A receptacle according to any one of claims 4 to 13, wherein the receptacle includes a liquid for entraining with the waste during an emptying operation.

5 15. A receptacle according to any one of claims 4 to 14, and further including restriction means for restricting the size of waste placed in the receptacle, the restriction means not substantially impeding the movement of waste out through the opening in response to the vacuum.

10 16. A receptacle according to claim 15, wherein the restriction means is at least one plate that in response to the vacuum moves from a waste-receiving position wherein the or each plate lies across the body member to restrict the size of waste placed therein, and waste emptying position wherein the plate is aligned substantially parallel to the longitudinal axis of the body member.

15 17. A receptacle according to claim 15 or claim 16, wherein the restriction means is incorporated in an insert that is attachable to the body member.

18. A method for emptying waste from a receptacle according to any one of claims 1 to 17, the method including the steps of:

applying a vacuum to the mouth of the receptacle to cause air from the atmosphere to enter the receptacle through the inlet means; and

20 increasing the velocity of the air once inside the receptacle to assist in drawing waste contained in the receptacle out through the mouth of the receptacle.

19. A method according to claim 18, and further including the step of adding a liquid and optionally a deodoriser to the receptacle after the waste is removed, the liquid
25 entraining with the waste when the receptacle is emptied.